

CLAIMS:

1. An exhaust gas control apparatus for an internal combustion engine, provided with a NOx storage/reduction catalyst provided in an exhaust passage and which stores NOx in exhaust gas by at least one of adsorption and absorption when an air-fuel ratio of in-flowing exhaust gas is lean, and then reduces and purifies the stored NOx using reduction components in the exhaust gas when the air-fuel ratio of the in-flowing exhaust gas is rich, the apparatus comprising:

an upstream side portion of a carrier of the NOx storage/reduction catalyst, which is positioned on an upstream side of an exhaust gas flow, and a downstream side portion of the carrier of the NOx storage/reduction catalyst, which is positioned on the downstream side of the exhaust gas flow, wherein the carrier carries an oxygen storage component that absorbs oxygen in the exhaust gas when the air-fuel ratio of the exhaust gas is lean and releases the absorbed oxygen when the air-fuel ratio of the exhaust gas is rich, and the amount of the oxygen storage component on the upstream side portion of the carrier is made less than the amount of the oxygen storage component on the downstream side portion of the carrier.

2. The exhaust gas control apparatus according to claim 1, characterized in that a NOx storage capacity of the upstream side portion of the carrier is made greater than the NOx storage capacity of the downstream side portion of the carrier.

3. The exhaust gas control apparatus according to claim 1 or 2, characterized in that the upstream side portion of the carrier and the downstream side portion of the carrier carry at least one of platinum, palladium and rhodium, and the NOx storage capacity of the upstream side portion of the carrier is made greater than the NOx storage capacity of the downstream side portion of the carrier by changing an amount of at least one of platinum, palladium and rhodium carried on the upstream side portion of the carrier and the downstream side portion of the carrier.

4. The exhaust gas control apparatus according to any one of claims 1 to 3,
characterized in that the NO_x storage capacity of the upstream side portion of the carrier
is made greater than the NO_x storage capacity of the downstream side portion of the
5 carrier by changing at least one of a carrier cell shape, a carrier cell size, and a carrier cell
number on the upstream side portion of the carrier and the downstream side portion of the
carrier.
5. The exhaust gas control apparatus according to any one of claims 1 to 4,
10 characterized in that the upstream side portion of the carrier and the downstream side
portion of the carrier are provided separately.
6. The exhaust gas control apparatus according to any one of claims 1 to 4,
characterized in that the upstream side portion of the carrier and the downstream side
15 portion of the carrier are provided integrally.